

Harvard Second Generat X


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Welcome to the Harvard Study of Adult Development

Find out more about the Second Generation Study >>

Lab Updates

J Club 2018.pdf Show all X

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24/01/2018

Good genes are nice, but joy is better...

After following the surviving “Crimson” men for nearly 80 years as part of the Harvard Study of Adult Development, one of the world’s longest studies of adult life, researchers have collected a cornucopia of data on their physical and mental health.

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DSM, Dept., Psychological Medicine.

Robert Waldinger is a psychiatrist, psychoanalyst and Zen priest.

He is Clinical Professor of Psychiatry at Harvard Medical School and directs the Harvard Study of Adult Development, one of the longest-running studies of adult life ever done.

[TED](#)

[Ideas worth spreading](#)

Successful Aging

Vaillant & Mukamal, Am J Psychiatry, 2001.

Martin-Joy et al, J Nerv Ment Dis 2017.



Conceptualizing Aging

- Aging can be seen from 3 dimensions
 - Decline
 - Change
 - Development



Decline

- By age 70 we identify only 50% of the smells
- Night vision declines...by age 80 few can drive at night
- By age 90 50% can not use public transportation



Change

- Hair, waistline, skin...change
- Making love shifts from 3/week to 2/month
- Our ability to love and be loved does not diminish
- Our capacity for joy is undiminished



Development

- At 70 we are more:
 - Patient
 - Accepting of affect in ourselves
 - Likely to tolerate paradox

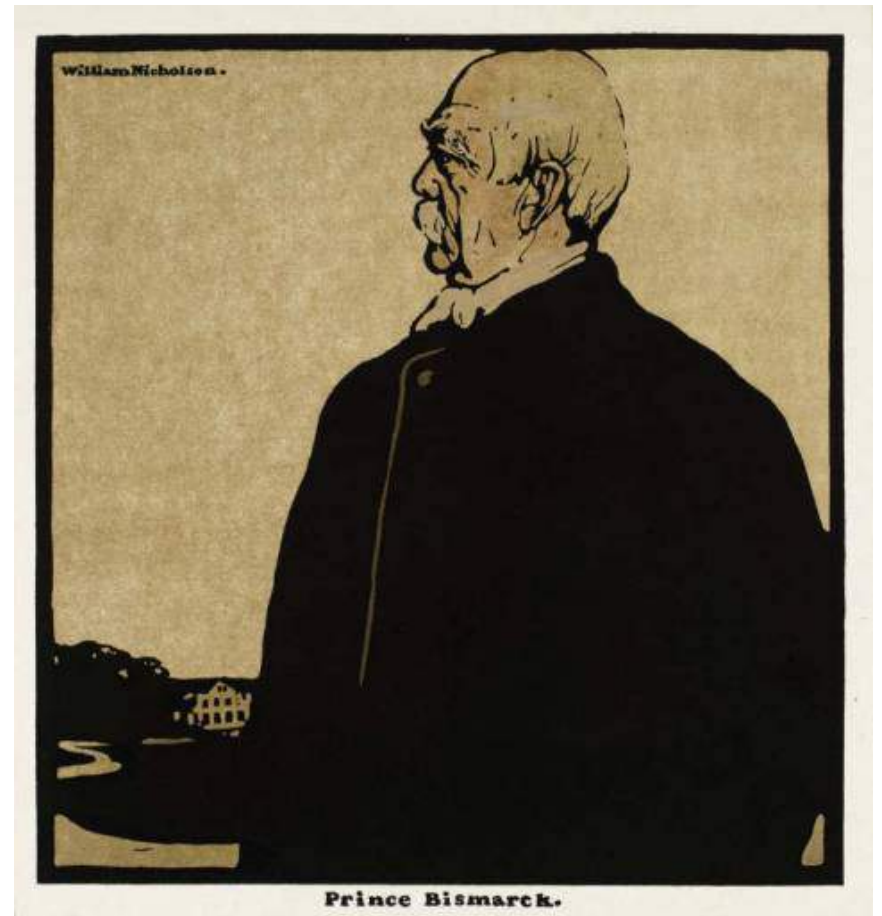


A Prospective Study of Successful Aging:
The Harvard Study of Adult Development (*HSAD*)
Vaillant & Mukamal, 2001

- We have NOT known how to predict successful aging till the HSAD.
- All large-scale prospective studies were flawed by “selective mortality”
- By beginning in late life these studies failed to include those who died before age 60 or 70
- The Harvard Study of Adult Development (HSAD) provides a way around some of these difficulties

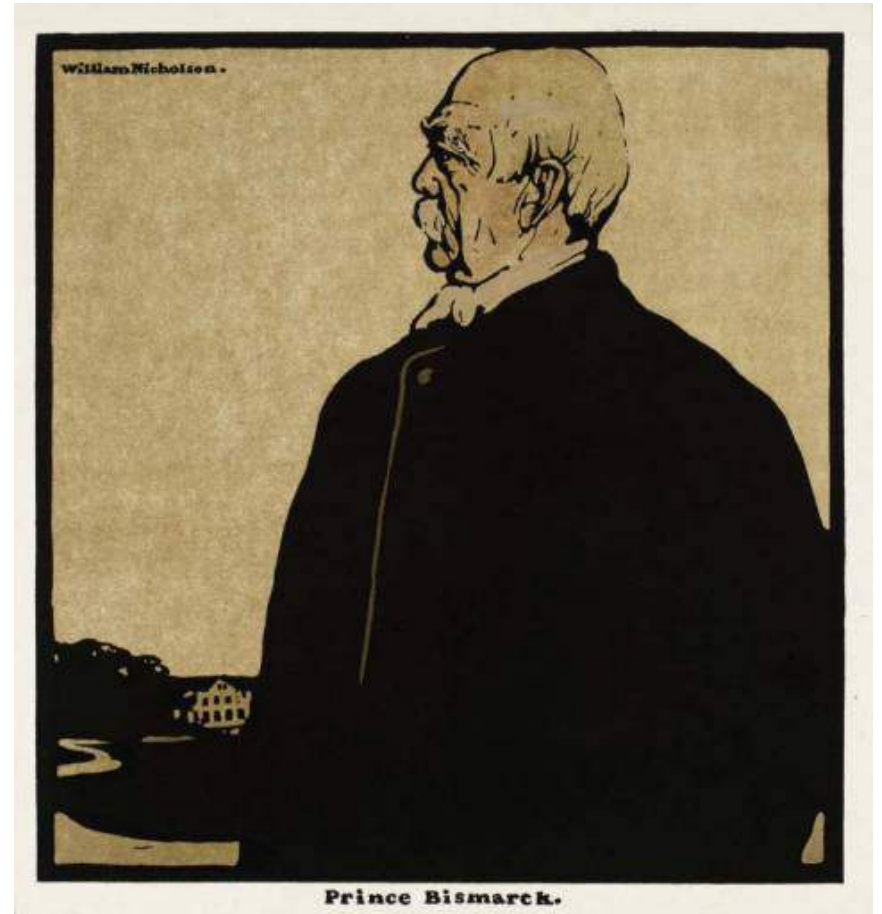
HSAD: Background

- The HSAD was initiated in Harvard
- Two socially diverse cohorts of adolescents (college vs. core-city) were followed until they became great-grandfathers
- Birth cohort was limited to the period 1918-1932
- Gender (male), Nationality (USA) and Skin Color (white) were held constant



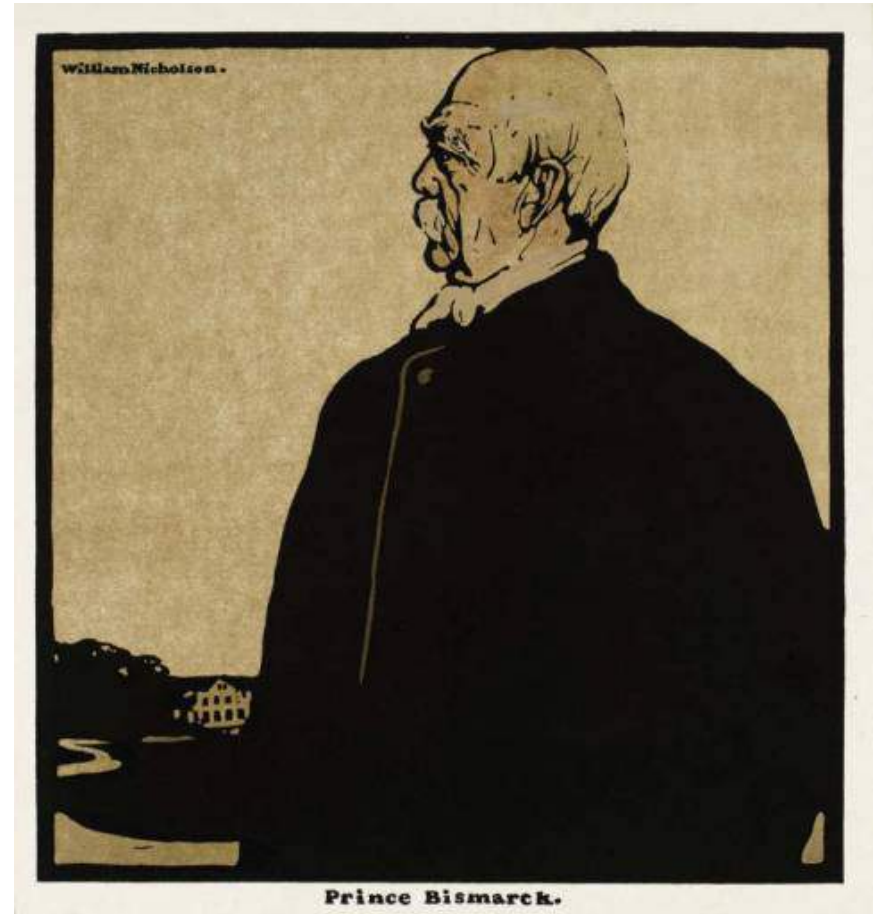
HSAD: Background

- When scientists began tracking the health of 268 Harvard sophomores in 1938 during the Great Depression, they hoped the longitudinal study would reveal clues to leading healthy and happy lives.



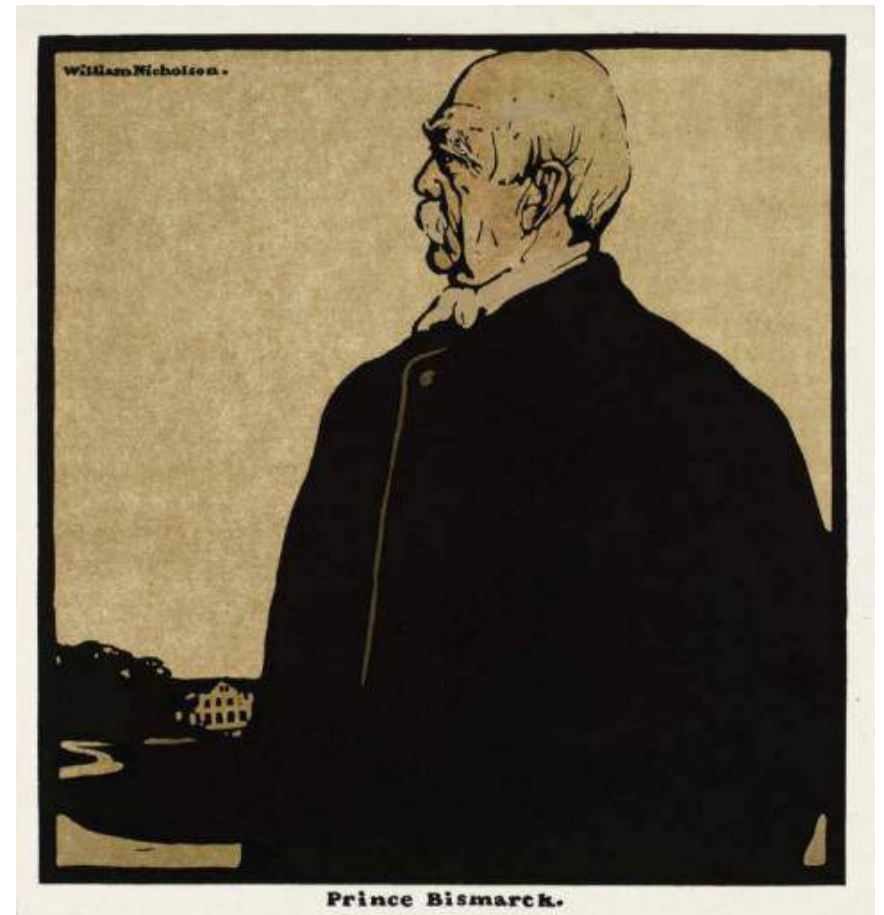
HSAD: Background

- Of the original Harvard cohort recruited, only 19 are still alive, all in their mid-90s.
- Among the original recruits was President John F. Kennedy
- Women weren't in the study because the College was all male.



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HSAD: Outcome Domains:

Six domains of function were chosen to classify old-age along a continuum from "happy-well" to "sad-sick"

- Physician assessed objective physical health and absence of irreversible physical disability
- Subjective physical health (instrumental tasks of daily living)
- Length of active life (No. of years before age 80 without objective/subjective physical disability)
- Objective mental health (evidence of competence in 4 domains: work, relationship, play and NO psychiatric care/medication)
- Subjective life satisfaction
- Social support (objective evidence of friends)



HSAD: Subjects



- **College cohort:**
 - 268 subjects
 - Harvard sophomores
 - Selected for physical and mental health
- **Core-city cohort:**
 - 456 subjects
 - Nondelinquent
 - Mean IQ 95
 - Mean education 10 years

HSAD: Independent Predictor Variables

- Smoking (pack years)
- Alcohol abuse/dependence (DSM-III)
- BMI (at age 50)
- Years of education (core-city only)
- Regular exercise (500 kCal/week)
- Stable marriage
- Maturity of defenses (at age 47; DSM-IV Defensive Functioning Scale)
- Depression (before age 50)
- Parental social class
- Warmth of childhood
- Ancestral longevity (mean mother's and father's age at death)
- Stable childhood temperament (parental report)
- Objective disability (at age 50)

HSAD: Global Measure

- Successful aging was assessed with a global measure at circa age 80 for college men and circa age 70 for core-city men:
 - 1=happy-well; no objective/subjective physical disability, objective psychosocial adjustment in top $\frac{3}{4}$, subjective life satisfaction in top $\frac{2}{3}$ and social supports in top $\frac{3}{4}$
 - 2=intermediate
 - 3=sad-sick; survival with 5 or more years of objective/subjective physical disability AND psychosocial adjustment in bottom $\frac{1}{4}$ OR life satisfaction in bottom $\frac{1}{3}$ OR social supports in bottom $\frac{1}{4}$
 - 4=prematurely dead (before 75-college; before 65-core-city)



HSAD: Results (1)

Quality of Aging

• College (237)

- Happy-well=26%(62){>80}
- Intermediate=32%(75){77.6}
- Sad-sick=17%(40){71.4}
- Prematurely dead=25%(60){62.3}

- Note: ()=N, { }=age at death/disability

• Core-city (332)

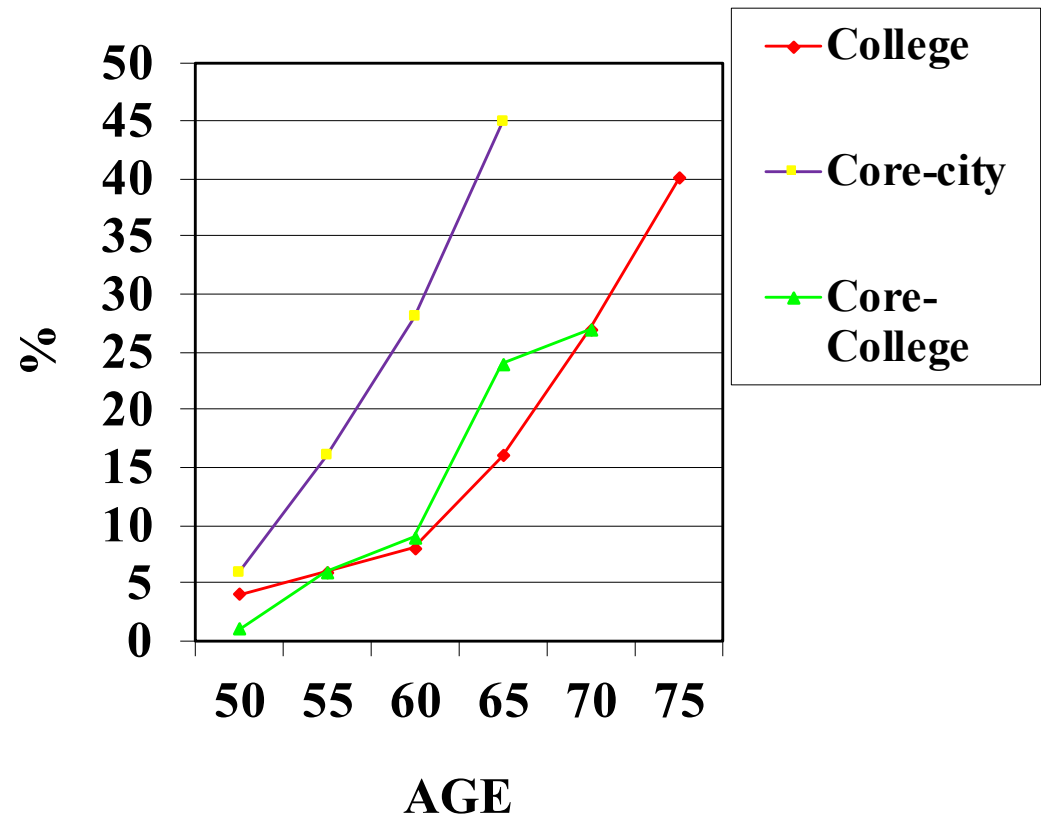
- Happy-well=29%(95){>70}
- Intermediate=34%(114){65.6}
- Sad-sick=14%(48){62.3}
- Prematurely dead=23%(75){55.0}

- Note: ()=N, { }=age at death/disability

HSAD: Results (2)

Rates of permanent Disability or Death after age 50

- Disability and death for the 2 groups increased over time
- The slopes in the graph are similar
- College-men reached every stage 10 years LATER than the core-city cohort



HSAD: Results (3)

Correlation of Predictor variables (before age 50) with 5 aging Outcomes



- Exercise and education are indirect measures of self-care and perseverance
- Both appeared to be important predictors of multiple domains of successful aging
- Preseverance (tested by the 5 mts treadmill test) at age 19 predicts 61% happy-well vs. 13% of the sad-sick (NOT explained by physical fitness) $p=0.005$

HSAD: Results (4)

Multivariate model

- Close relationships, more than money or fame, are what keep people happy throughout their lives, the study revealed.
- Those ties protect people from life's discontents, help to delay mental and physical decline, and are better predictors of long and happy lives than social class, IQ, or even genes.
- That finding proved true across the board among both the Harvard men and the inner-city participants.

HSAD: Discussion (1)

- Narrowness of cohorts limits generalization
- Data is offered as a heuristic schema of successful aging
- Intention is to offer a testable model



HSAD: Discussion (2)

Problem

- Importance of predictor variables changes over time
- Unhappy childhood predicted poor health at 50 but NOT at 80
- Serum cholesterol levels predict heart disease for young adults BUT not after 70
- Shortened ancestral longevity is a risk factor for men dying between ages 40-60 BUT most die after age 60

Development of Adaptive Coping From Mid to Late Life:
A 70-Year Longitudinal Study of Defense Maturity and Its Psychosocial Correlates.

OVERVIEW

- Men who came from warm childhood families had reached their peak of defense maturity by age 52.
- However, men from less warm families showed significant continued maturation of defenses well into late life.
- Thus, this study has unexpected relevance to the phenomenon of resilience—the achievement of adaptive outcome despite risk.

Development of Adaptive Coping From Mid to Late Life:
A 70-Year Longitudinal Study of Defense Maturity and Its Psychosocial Correlates.

IMPLICATION

- In this respect, these results provide an empirical basis for countering the still-common belief that late life is exclusively a time of decline.

The Study of Adult Development

MESSAGE

- The 7 protective factors that distinguish happy-well from sad-sick are under some personal control
- We have considerable control over our weight, exercise, education, smoking & alcohol abuse
- Hard work or therapy can modify our coping styles & relationship with spouses
- **Successful old-age may lie not so much in our stars and genes as in ourselves**

